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Overview of the EPRI Radioactive Material Monitoring and Control Guideline



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Radiation, Chemistry, Low-Level Waste



RAM Control Guideline

Issue:

- Erosion of worker/public confidence due to inconsistent monitoring and releasing practices.

Objective:

- To promote consistency and best practices for monitoring and controlling radioactive materials.

Results to Date:

- Guideline published 12/2009
- Presentation to NRC 12/2009

Benefits:

- Enhance worker and public confidence
- Save money and time by defining practical detection capabilities for release of materials and personnel

RAM Control Guideline Committee Members (>90% Reactor Units Represented)



DTE Energy



RAM Control GL Document Chapters

- Introduction
- Definitions
- Equipment and Material Monitoring and Control
- Personnel Contamination Monitoring
- Calibration and Performance Checks of Personnel and Equipment Contamination Monitors
- References
- Appendices
 - Appendix A: Example Release Process
 - Appendix B: Example Material Release Plan and Form
 - Appendix C: Monitoring Considerations
 - Appendix D: Determination of MDC
 - Appendix E: Information on Managing Workers with Radiopharmaceutical Uptakes

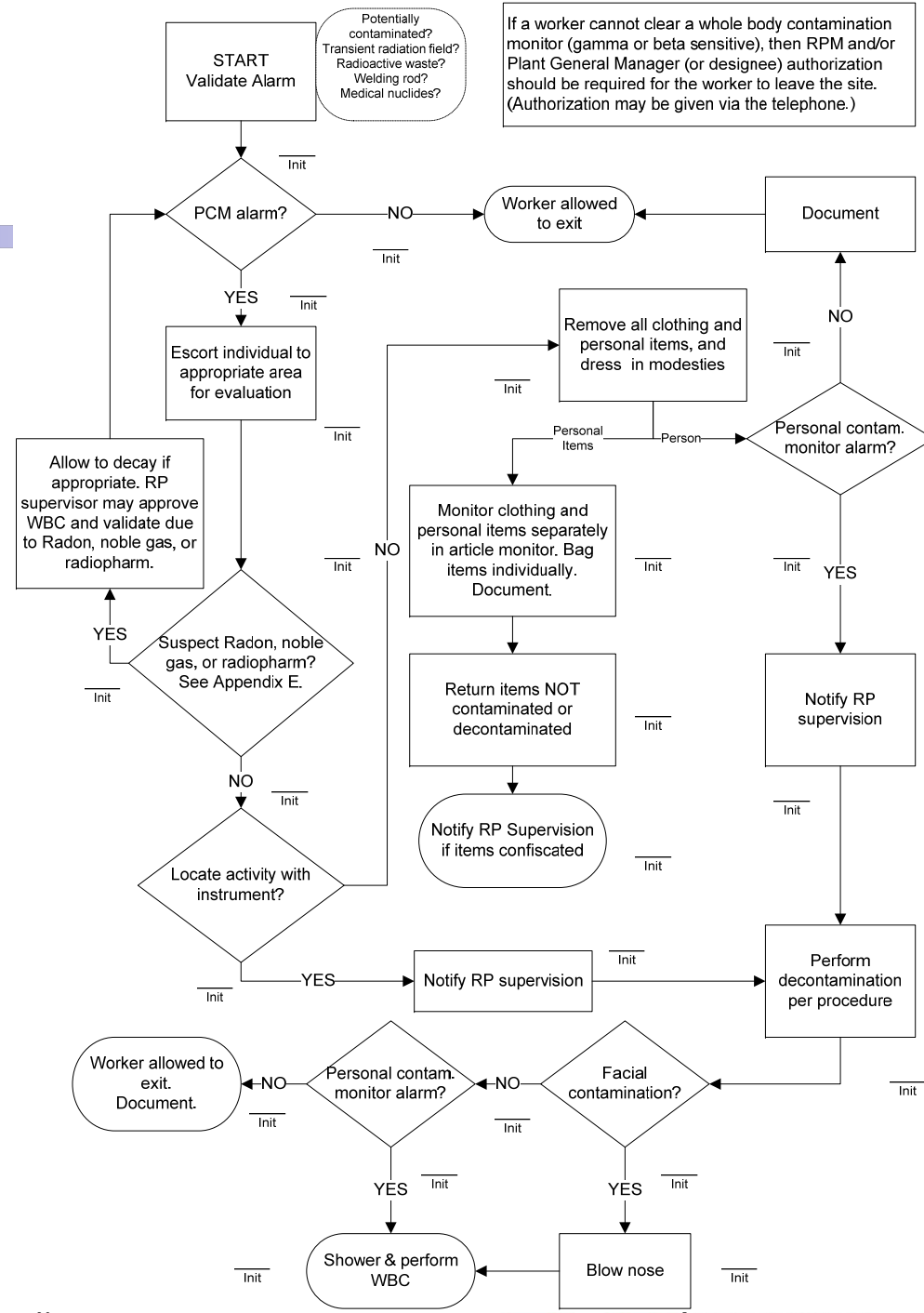
Highlights

- Chapter 3: Equipment and Material Monitoring and Control
 - Monitoring Responsibilities and Notification Process
 - Plant Personnel (including contract workers)
 - RP Supervision
 - RP Technicians
 - Unconditional Release of Materials from RCA
 - Tools, Equipment, Non-Volumetric Materials
 - Items with potential for internal contamination
 - Personal Items (e.g. flashlights, pagers, cell phones)
 - Volumetric materials (e.g. soil, concrete)
 - Vehicles



Highlights

- Chapter 4: Personnel Contamination Monitoring
 - Responsibilities
 - Plant personnel
 - Radiation Protection Technicians and Supervision
 - Contamination monitoring requirements for radiological areas
 - Provides an example of a whole body contamination monitor flow process



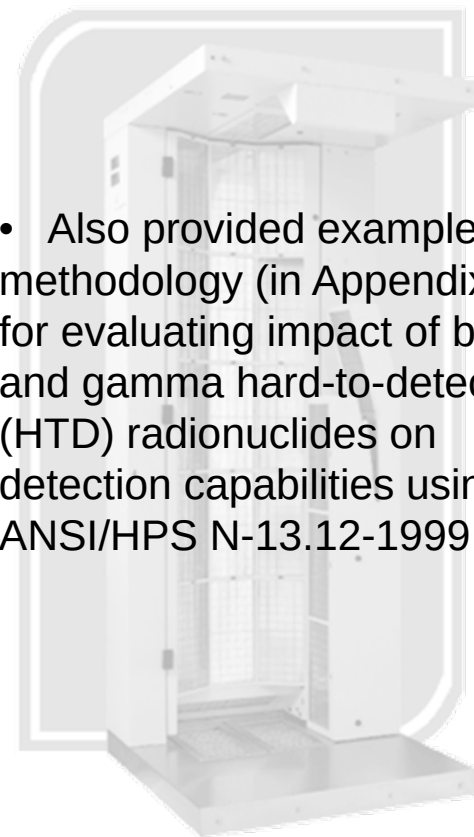
Highlights

- Chapter 5: Calibration and Performance Checks

Summary of Recommendations for Calibration and Performance Checks of Personnel and Equipment Contamination Monitors:

Type of Monitor	Calibration Source	Detection Capability	Check Source
β Whole Body	Tc-99	5,000 dpm (83 Bq) beta	5,000 betas/min. equivalent Tc-99, 100 cm ²
γ Whole Body	Cs-137	RCA/PA exit: 75 nCi (2800 Bq) Cs-137 at 6 in.	75 nCi Cs-137 equivalent
γ Article Monitor	Cs-137	5,000 dpm Co-60 equivalent	5,000 dpm Co-60 equivalent
β Hand and Foot	Tc-99		5,000 betas/min. equivalent Tc-99, 100 cm ²

- Also provided example methodology (in Appendix) for evaluating impact of beta and gamma hard-to-detect (HTD) radionuclides on detection capabilities using ANSI/HPS N-13.12-1999



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